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ABSTRACT

The author discusses the activities and goals of advocates of creation science as these persons and groups work to bring about the teaching of creationism in high school science courses in which evolution is taught. It is the author's belief that the anti-evolutionism movement was stimulated by the science curriculum improvement activities of the 1960's, particularly the activities of the Biological Sciences Curriculum Study. Change through time (evolution) was one of the BSCS conceptual themes. Its incorporation into high school biology textbooks resulted in textbooks containing material on evolution that was not confined to the last chapter (which might never be reached during the school year). Efforts of the anti-evolutionists have resulted in changes in textbooks produced in the early 1980's in which controversy is avoided by de-emphasis on evolution or on the exclusion of the word from the textbook although natural selection and related topics are included. Creationism, the author contends, has failed to compete in the scientific and theological worlds of scholarship and its perpetuation in public school curricula should not be used to impose religious views on students. (PB)

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SHOULD CREATION BE INCLUDED IN THE BIOLOGY CURRICULUM?

by

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of the

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In the late 1800's, Alice Applegate sat in a white schoolhouse planted among the hills of Ashland, Oregon writing a theme. It read "Addam was the first man that looked out upon the face of the earth and he was then in the garden of eden. Around him were all kinds of fruit and flowers and in the center of the garden grew the tree of Knowledge of Good and Evil . . . ." (Tyack & Hansot, p. 4). Alice, her teacher, family and members of the community undoubtedly were confident that the Bible explained and ordered the universe.

The creation accounts in Genesis transmit the beliefs and values of many people yet today. A 1980 Gallup Poll revealed that 58 percent of the Protestants and 47 percent of the Catholics polled believed that human life began with Adam and Eve (Noll, 1980). As a reflection of these beliefs, an October 1981 Associated Press - NBC News poll indicated that 76 percent of Americans believed "that both the scientific theory of evolution and the biblical theory of creation should be taught in public schools" (Associated Press, 1981).

The results of these and other polls are used to argue that creationism should be included in the biology curriculum out of fairness and that to do otherwise represents censorship and is a violation of the academic freedom of students. Wendell Bird, an attorney for the Institute for Creation Research, argued that "a fairminded individual will want public schools to teach both the scientific evidence for evolution and

and the scientific evidence for creation" (1980, p. 157). The Governor of Arkansas used fairness as a reason for signing the creationist legislation this summer.

Fairness is difficult to define. In schools, fairness means more than catering to a majority view point or yielding to a powerful special interest group. An education that is fair is one that provides for maximum development of youth and the continuing cultural well-being of society (Goodlad, 1979).

How does the concept of fairness fit into our decisions about the biology curriculum? Is it fair to students and the future of our nation to include ideas in the biology curriculum that do not explain the natural world or pull together various biological facts? Is it fair to present religious dogma to students under the guise of science when nearly all biologists and mainstream theologians reject the dogma? Out of a sense of fairness, schools cannot treat all forms of knowledge alike. Some knowledge is more necessary than other knowledge. Some knowledge prepares students for the future. Other knowledge could handicap students for the future. Education is the act of making distinctions. In health classes, fad diets, quack remedies, and old wive's tales cannot be taught along with medically accepted procedures for weight reduction and the prevention and remediation of diseases. In the case of biology, we must discriminate between ideas that explain the natural world and those that do not. We cannot corrupt, balkanize, and prostitute the curriculum

by passing out bits and pieces of information based on the desires and whims of special interest groups. For example, we cannot justify including the Nazi or Ku Klux Klan view that there was a separate origin or creation of the different ethnic groups. There is no justification for including the viewpoints of Eric van Daniken in the CHARIOTS OF THE GODS that we are the result of the cross-breeding of extra-terrestrial beings and ape-men on earth. Richard Mooney's premise that we are extra-terrestrial transplants placed here 40,000 years ago with clothes, fire, weapons, shelter, and native intelligence has no place in the biology curriculum. In California, an effort has been made to have the Satanic view of origins emphasized in the science curriculum. I am sure many people pleading for fairness, calling for academic freedom, and equal time for different ideas would object vehemently to having Satanic views taught in science classrooms. I would too. Good science is characterized by its ability to unite many different areas of knowledge into one integrated whole. Satanic viewpoints and the premises of Richard Mooney, Eric van Daniken, and the creationists do not meet this criteria. Instead of serving unifying and integrative functions, these ideas serve to distort, ignore, corrupt, and contradict established facts. It seems foolish to argue that public institutions, already under attack for being irrelevant, should include ideas considered irrelevant by most biologists for the past century. It also seems foolish to include non-science in an already filled biology curriculum. Despite much confusion among the public and many who should know better,

there is no question about the scientific nature of creationism. Duane Gish, the renowned debator and Associate Director for the Institute for Creationist Research recently wrote that:

> As a creationist scientist, I wish to point out that creation science scientists readily acknowledge that creation is not a scientific theory. The concept of creation lies beyond the limits of empirical science, it does not provide a testable scientific theory, nor can it be disproved. (1981, p. 20)

The admission of creationists that their tenets are not scientific expose their motives and weaken their arguments calling for fairness. Their goals have nothing to do with improving science education. Their goals have more to do with faith maintenance and conversion and because of this we have no obligation to teach creationism in our schools. To accomplish these goals, they feel it is necessary to eliminate or, at least, neutralize the teaching of evolution. Nell Seagraves, who started the Creation Research Society in San Diego and whose son and grandchildren were plaintiffs in the Sacramento creationist trial, "freely asserts that the purpose of the movement is 'to get the biblical belief system into the schools' and the evolution heresy out" (Vivrano, 1981, p. 30). Henry Morris (1974), director of the Institute for Creation Research, stated "We seek not only to win scientists to Christ, but even to win the sciences themselves to Christ" (p. 215).

In an earlier ICR newsletter, Morris (1973) stated that "A revival of solid belief in special creation, especially among young people, could easily spark the greatest movement of true evangelism and Christian consecration of modern times." An ICR survey in 1976 showed some previous success in achieving the goals of conversion and faith

maintenance. Specific comments from individuals returning the ICR questionnaire included:

> My opportunities to witness for Christ in a public classroom setting has increased from practically nothing to a common occurrence (Gish and Rohrer, 1978, p. 227).
>
> This literature has helped some of my students to accept creation and to believe in Christ (Gish and Rohrer, 1978, p. 226).

Morris concluded from this survey that:

> It is now evident, both from scripture and from experience, that scientific Biblical creationism can and should play a vital role in evangelism and in Christian faith and life, as well as in true science and education (Gish and Rohrer, 1978, p. 231).

The use of public schools to achieve religious goals clearly is unconstitutional. In Epperson v. Arkansas, the U.S. Supreme Court, in striking down an anti-evolution law in Arkansas, declared that:

> Government in our democracy, state and national, must be neutral in matters of religious theory, doctrine, and practice. It may not be hostile to any religion or the advocacy of no-religion; and it may not aid, foster, or promote one religion or religious theory against another or even against the militant opposite. The First Amendment mandates governmental neutrality between religion and nonreligion. (Epperson v. Arkansas, 393 US 97, 234).

The requirement that schools be neutral in matters of religion has been troublesome for creationists. In the recent and well-publicized creationist trial in California, the plaintiffs dropped their request for equal time for creationism in the science curricula. The presiding judge commented that "it was appropriate that they do so" as he had "no doubt whatsoever that such an accommodation would be held to be violating the establishment clause" (Sacramento Creationist Trial, p. 1). Legislative or policy-making actions that mandate the teaching of creationism must meet the test of secular purpose and avoid entangling

religion with government. Secular purpose is violated when "the activity is one which is so clearly religious in nature as to make a sham of the stated purpose" (Smith and Hayes, p. 365). Excessive entanglement is present if "comprehensive, discriminating and continuing state surveillance will inevitably be required to ensure the rules are obeyed and the First Amendment respected" (403 U.S. at 619).

On the basis of stated creationist goals and the many sectarian premises found in their instructional and reference materials, this surveillance apparently will be necessary where equal time mandates exist.

State and religion could become entangled in other curricula areas if creationists achieve their goals. The ICR goals for 1981 included the development of "two-model books in every subject and at every level (Morris, 1981). During the 1981 Texas textbook adoption proceedings, there were several demands that specific areas in textbooks be neutralized by biblical ideas. For example, social studies textbooks that discussed the human transition from nomadic hunters and gatherers to farmers were criticized for not including Cain's "theory." According to this so-called theory, farming could not have been preceded by hunting and gathering because Cain, the son of Adam, was a farmer. Psychology textbooks were criticized for not including Judeo-Christian viewpoints. Textbooks were criticized for contradicting or not including biblical ideas on the role of women, marriage, sex, and child raising. One petitioner argued against the inclusion of the metric system in an earth science textbook because "If the Lord had meant for the decimal system to be used he would have had 10 apostles" (Texas Education Agency, 1980, p. 78).

These and other examples of protests lodged against textbooks illustrate how equal time legislation for ideas derived from the Bible have the potential to entangle state and religion and make the tasks of teachers, authors, and publishers nearly impossible.

Considering the goals of creationists, their admission the creationism is not scientific, and the requirements of the First Amendment of the Constitution, it seems foolish that we continue to have arguments over the place of creationism in the science curriculum.

Many fundamentalist preachers know they have a good cause in their attack on evolution. They use this cause to attract media attention, increase their television and radio audiences, and attract financial contributions. For example, Jerry Falwell of the Old Time Gospel and the Moral Majority currently is soliciting money to buy television time to air a debate on this topic. His letter is headed with large, red print that reads "The Battle is Raging..." The letter asked for a gift of $15, $25, or $100 to use in the creation vs. evolution campaign. A brochure describing a "Jerry Falwell Teaches Bible Creation" with 6 cassette tapes "personally prepared by Dr. Falwell on Bible Creation" also is mailed with the letter. The cost of the 6 tapes is $100 and can be charged via Mastercharge or Visa.

In view of the price of these tapes, I have to agree with Billy Carter, who wrote in his first Redneck Reason column in OUI magazine that we need to "put Falwell and his chosen few back to work for a living, instead of letting them live high off the hog of the rest of us" (Dallas Morning News).

Creationists may or may not be stopped in their efforts to get equal time for their beliefs. However, there is no doubt they have been successful in the campaign to have evolution de-emphasized or eliminated.

During the past 15 years I have analyzed nearly 100 high school biology textbooks to determine how evolution has been emphasized. There are clear trends. The coverage of evolution in biology textbooks prior to 1960 generally was brief, noncontroversial, and characterized by restraint (Skoog, 1979). There was an increase in emphasis through the 1930's and 1940's. A slight de-emphasis occurred in the 1950's when 8 of the 14 textbooks reviewed did not use the word evolution anywhere. All 14 textbooks had the material on evolution in one of the final chapters. Undoubtedly, this was planned so it would be convenient never to get to the chapter on evolution. In the 1960's evolution received unprecedented coverage in the textbooks. This clearly was the result of the use of evolution as a theme by the Biological Sciences Curriculum Study in the development of the three versions in 1961 and the revised versions in 1963 and 1968. Evolution was developed and integrated throughout these textbooks. The coverage of evolution in other textbooks also increased and became more comprehensive and straightforward.

The unprecedented attention given to evolution in the textbooks of the 1960's was one of the factors that fueled the anti-evolutionist movement. The biology textbooks of the 1970's are a testimony to the modest success of this movement. The overall coverage given to evolution in these textbooks was reduced. In certain textbooks the emphasis on selected topics concerned with evolution was drastically reduced or eliminated. Changes in wording resulted in material that

was more cautious and indefinite about evolution. Evolution still was covered in a comprehensive manner in the textbooks of the 1970's but a trend was established that continues today and threatens to make the study of evolution a peripheral and neglected part of the biology curriculum as it was prior to the 1960's.

The past returned to the public schools when in 1981 a biology textbook was published that did not use the word evolution anywhere. This textbook has no specific chapter on evolution but has material on natural selection, human evolution, and other topics concerned with evolution scattered throughout. A 1980 textbook gave solid coverage to evolution but evolution was not listed in the glossary. The word evolution was used only once in the chapter on evolution in this 1980 textbook. It appeared in the last sentence. The coverage of human evolution was very brief in this textbook. Another 1980 textbook, with 2 chapters on evolution, did not include anything on human evolution.

The steady de-emphasis of evolution in biology textbooks during the past decade has not been the result of a diminishing in the power of evolution to explain and make sense out of the natural world. Instead, the de-emphasis has been the result of publishers, authors, educators, and politicians responding to the strenuous efforts of anti-evolutionists to suppress and diminish the study of evolution. This effort is an ideological movement and should not be confused with a scientific movement. The creationist movement, which is an attempt to restore biblical authority and enhance the influence of fundamentalist religion, tears down decades of scientific work while offering nothing new in its place. Creationism has failed to compete in the scientific and

theological worlds of scholarship and its supporters must not be allowed to guarantee, through other tactics, its perpetuation in public forums.

Also, as Thanksgiving approaches, we should recall the Pilgrims came to this country because alien religious viewpoints were being forced upon them in England. Many other people followed them for the same reason. We should not repeat the mistake of England and other countries by using public schools to force religious views on students. Current events and recent history provide too many negative examples of what happens when religious dogma is imposed on students and citizens.

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